

AMENDMENTS TO THE CLAIMS

1. (Currently Amended) A computer implemented method for generating a term-structure of default probabilities, comprising the steps of:

at least one computer determining a default process by performing the steps comprising;

determining a firm's default barrier distribution from a plurality of risk factors comprising said firm's value and an unobservable default barrier, said unobservable default barrier comprising an incomplete information model;

determining said firm's conditional default probability over time using said default barrier distribution;

determining a pricing trend function using said conditional default probability where said pricing trend function estimates a probability of default of said firm; and

said at least one computer generating said term structure of default probabilities for said firm based on said pricing trend function.

2. (Previously Presented) The computer implemented method of Claim 1, further comprising the step of:

calibrating parameters to represent the quality of incomplete information.

3. (Original) The computer implemented method of Claim 1, further comprising the step of:

estimating diffusive and jump components of credit risk premium.

4. (Original) The computer implemented method of Claim 1, further comprising the step of:

estimating market implied recovery rates.

5. (Original) The computer implemented method of Claim 1, wherein said step of determining conditional default probability uses information comprising histories of equity prices, debt outstanding, agency ratings, and accounting variables.

6. (Previously Presented) The computer implemented method of Claim 1, further comprising the steps of:

- providing capability for triggering a default event when a firm value falls below a default barrier value;

- providing capability for incorporating an assumption that said default barrier value is not publicly known;

- providing capability for representing a predefault firm value process by a geometric Brownian motion; and

- using a history of fundamental data and other publicly available information in determining said default barrier distribution and for estimating parameters of said firm value process.

7. (Previously Presented) The computer implemented method of Claim 6, further comprising the steps of:

- using histories of daily equity prices and equity volatility forecasts, reported liabilities, and risk-free interest rates as input to said step of determining a conditional default probability;

- using option pricing formulae to convert said equity prices and said equity volatility forecasts into associated firm values and firm volatility;

- estimating a mean and height of a scaled beta distribution from history of firm leverage ratios; and

- providing capability for calibrating a degree of confidence about information by providing variance of said distribution as a free parameter.

8. (Currently Amended) A computer system for generating a term structure of default probabilities comprising:

at least one computer memory having program code that when executed operates at least one computer to determine a default process by performing the steps comprising;

determining a firm's default barrier distribution from a plurality of risk factors comprising said firm's value and an unobservable default barrier, said unobservable default barrier comprising an incomplete information model;

determining said firm's conditional default probability over time using said default barrier distribution;

determining a pricing trend function using said conditional default probability, where said pricing trend function estimates a probability of default of said firm; and

said at least one computer memory having program code that when executed operates said at least one computer to generate said term structure of default probabilities for said firm based on said pricing trend function.

9. (Previously Presented) The computer system of Claim 8, further comprising:
calibrating parameters to represent the quality of incomplete information.

10. (Previously Presented) The computer system of Claim 8, further comprising:
estimating diffusive and jump components of credit risk premium.

11. (Previously Presented) The computer system of Claim 8, further comprising:
estimating market implied recovery rates.

12. (Previously Presented) The computer system of Claim 8, wherein said step of determining conditional default probability uses information comprising histories of equity prices, debt outstanding, agency ratings, and accounting variables.

13. (Previously Presented) The computer system of Claim 8, further comprising:

capability for triggering a default event when a firm value falls below a default barrier value;

capability for incorporating an assumption that said default barrier value is not publicly known;

capability for representing a predefault firm value process by a geometric Brownian motion; and

using a history of fundamental data and other publicly available information in determining said default barrier distribution and for estimating parameters of said firm value process.

14. (Previously Presented) The computer system of Claim 13, further comprising:

using daily equity prices and equity volatility forecasts, reported liabilities, and risk-free interest rates as input to said step of determining a conditional default probability;

using option pricing formulae to convert said equity prices and said equity volatility forecasts into associated firm values and firm volatility;

estimating a mean and height of a scaled beta distribution from history of firm leverage ratios; and

calibrating degree of confidence about information by providing variance of said distribution as a free parameter.

15. (Currently Amended) A computer program product comprising a computer useable medium having control logic stored therein for causing at least one computer to generate a term structure of default probabilities comprising:

computer readable program code for causing said at least one computer to determine a default process by performing the steps comprising:

determining a firm's default barrier distribution from a plurality of risk factors comprising said firm's value and an unobservable default barrier, said unobservable default barrier comprising an incomplete information model;

determining said firm's conditional default probability over time using said default barrier distribution;

determining a pricing trend using said conditional default probability, where said pricing trend function estimates a probability of default of said firm; and; and

computer readable program code for causing said at least one computer to generate said term structure of default probabilities for said firm based on said pricing trend function.

16. (Previously Presented) The computer program product of Claim 15, further comprising:

causing said at least one computer to calibrate parameters to represent the quality of incomplete information.

17. (Previously Presented) The computer program product of Claim 15, further comprising:

causing said at least one computer to estimate diffusive and jump components of credit risk premium.

18. (Previously Presented) The computer program product of Claim 15, further comprising:

causing said at least one computer to estimate market implied rates.

19. (Original) The computer program product of Claim 15, wherein said step of determining conditional default probability uses information comprising histories of equity prices, debt outstanding, agency ratings, and accounting variables.

20. (Previously Presented) The computer program product of Claim 15, further comprising:

causing said at least one computer to provide capability for triggering a default event when a firm value falls below a default barrier value;

causing said at least one computer to provide capability for incorporating an assumption that said default barrier value is not publicly known;

causing said at least one computer to provide capability for representing a predefault firm value process by a geometric Brownian motion; and

causing said at least one computer to use a history of fundamental data and other publicly available information in determining said default barrier distribution and for estimating parameters of said firm value process.

21. (Previously Presented) The computer program product of Claim 20, further comprising:

causing said at least one computer to use histories of daily equity prices and equity volatility forecasts, reported liabilities, and risk-free interest rates as input to said step of determining said conditional default probability;

causing said at least one computer to use option pricing formulae to convert said equity prices and said equity volatility forecasts into associated firm values and firm volatility;

causing said at least one computer to estimate a mean and height of a scaled beta distribution from history of firm leverage ratios; and

causing said at least one computer to provide capability for calibrating a degree of confidence about information by providing variance of said distribution as a free parameter.

22. (Previously Presented) The computer implemented method of Claim 1, wherein said pricing trend function values credit-sensitive securities.

23. (Previously Presented) The computer implemented method of Claim 1, further comprising:

said at least one computer creating fair values of credit-sensitive and

default contingent securities based on said conditional default probability, said pricing trend, and said default barrier distribution.

24. (Previously Presented) The computer implemented method of Claim 1, further comprising:

outputting to an investor, said term structure of default probabilities.

25. (Previously Presented) The computer implemented method of Claim 1, further comprising:

determining a compensator using said conditional default process.

26. (Previously Presented) The computer system of Claim 8, wherein said pricing trend function values credit-sensitive securities.

27. (Previously Presented) The computer system of Claim 8, further comprising:

creating fair values of credit-sensitive and default contingent securities based on said conditional default probability, said pricing trend, and said default barrier distribution.

28. (Previously Presented) The computer system of Claim 8, further comprising:

said at least one computer memory having program code that when executed operates at least one computer to output to an investor said term structure of default probabilities.

29. (Previously Presented) The computer system of Claim 8, further comprising:

determining a compensator using said conditional default process.

30. (Previously Presented) The computer program product of Claim 15, wherein said pricing trend function values credit-sensitive securities.

31. (Previously Presented) The computer program product of Claim 15, further comprising:

creating fair values of credit-sensitive and default contingent securities based on said conditional default probability, said pricing trend, and said default barrier distribution.

32. (Previously Presented) The computer program product of Claim 15, further comprising:

computer readable program code for causing said at least one computer to output to an investor said term structure of default probabilities.

33. (Previously Presented) The computer program product of Claim 15, further comprising:

causing said at least one computer to determine a compensator using said conditional default process.